Pitcher Plants in Alabama

By **FRED NATION**, Educator, Baldwin County

The white-topped pitcher plant ranks among the world's most beautiful plants.

A healthy pitcher plant bog is a stunning site, filled with dramatic shapes and intense colors that are equaled by very few natural habitats. Seven of the eight southeastern pitcher plant species, all in the genus *Sarracenia,* are native to Alabama.

Our pitcher plant populations are steadily declining, due to over-collection of native stocks, fire suppression, and habitat loss. Much of the bog and savanna acreage in Alabama has been drained or filled over the years, to convert the land to more productive uses. Habitat loss has become critical in coastal areas, where urbanization and population pressures are rapidly increasing.

Pitcher plants are rather habitat-specific. Except for minor differences, mainly in soil moisture, their environmental requirements are similar, and several *Sarracenia* species can often be found growing in the same area. They are occasionally seen in wet ditches and other non-salty, moist sunny areas, but the vast majority are found in porous, infertile, strongly acidic soils with a high water table. These areas are commonly referred-to as pitcher plant bogs or savannas. Some of these habitats are very large, particularly in the coastal counties, where historically they covered thousands of acres. More frequently, pitcher plant bogs occur as small pockets or enclaves in our fire-dependent pine ecosystems.

This rare pink natural hybrid is from a bog in north Mobile County.

Carnivorism is an interesting strategy that pitcher plants have developed to permit them to thrive in conditions where soil nutrients are very poor. Pitcher plants are true carnivores. They capture and consume animals, mostly insects, with an occasional small frog or toad, to supplement the low soil fertility in their native habitats.

The leaves of *Sarracenias* are highly modified into "catch tubes." Most species secrete attractive scents, and insect prey are probably also attracted by the odor from the decaying bodies of previously captured victims. Upper interior surfaces of the catch-tubes are waxy and smooth, with stiff, downward-pointing hairs farther down in most species. Once insects are inside the tube, the climb back out is very difficult. Most eventually fall into a pool of liquid at the bottom of the pitcher that contains enzymes and bacteria to hasten the decomposition process. Minerals and nutrients from decomposed prey are directly absorbed by the pitcher plants.

Fire suppression has contributed greatly to the decline in our pitcher plant populations. Without periodic burns, aggressive mid-story species, such as catbriers, gall berry hollies, and bayberries quickly overwhelm and shade out the smaller helophytic (sun-loving) pitcher plants. Good forest management practices, particularly controlled-burn regimes that include pitcher plant bogs and savannas, can be very beneficial to the continued survival of our declining pitcher plant populations in Alabama.

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One humorous folk name for the purple pitcher plant is "frog britches!"

Over collection and habitat loss have made the yellow trumpet rare in Alabama.

Alabama's Pitcher Plants

Green Pitcher Plant (*Sarracenia oreophila)* has yellow flowers and tubes of pale green, often with red veination. It is the most rare of the *Sarracenias* and on the verge of extinction. It is federally protected under the *Endangered Species Act.* Its range is very limited, with only 31 of its 34 known remaining populations in northeastern Alabama.

Parrot Pitcher Plant (*Sarracenia psittacina)* has dark red flowers. It has relatively small pitchers, usually 6" or less and they often lie on the ground. Its tips are spherical. Its occurrence is relatively frequent and it grows in a bit wetter environment than most. Its range in Alabama is the southern tier of counties

Purple Pitcher Plant (*Sarracenia purpurea)* has flowers and pitchers variable, dark red to green. The tubes are stout, short and most are horizontal, with "collars" instead of lids. It is relatively frequent, with the largest area of any *Sarracenia*, reaching into Canada. Its range in Alabama is the southern half of the state.

Sweet Pitcher Plant (*Sarracenia rubra*) has maroon flowers, often tinged with green. The flowers are many times taller than the pitchers. The lid of the plant sometimes points upward. It is the smallest of the upright species and it is botanically confusing, with a complex of subspecies. It is rare or uncommon throughout its range that, in Alabama, is the extreme southern portion of the state. Most subspecies are considered endangered.

White-topped Pitcher Plant, or **Crimson Pitcher Plant** (*Sarracenia leucophylla)* has dark red flowers. The pitchers are white near the top, with prominent red or green veins. The lid is wavy or undulate. It is widely held to be the most beautiful pitcher plant on Earth. Though still relatively frequent in Baldwin and Mobile Counties, populations are rapidly declining throughout. In Alabama the range is across the extreme southern part of the state.

Winged Pitcher Plant, or **Pale Pitcher Plant** (*Sarracenia alata)* has yellow, sometimes nearly white flowers. Pitchers and persistent flower parts are pale green, often diffused with deep red. It is more tolerant of heavy soils than most species. Good populations remain in Mobile County. Range in Alabama is limited to the southwest corner of the state.

Yellow Trumpet, or **Biscuit Flower**, *(Sarracenia flava)* has yellow flowers. Trumpets are pale green, often with fine red veination, and a dark red patch in the hinge just below the lid. Range in Alabama is Baldwin County eastward across the extreme southern portion of the state. It has become very rare.